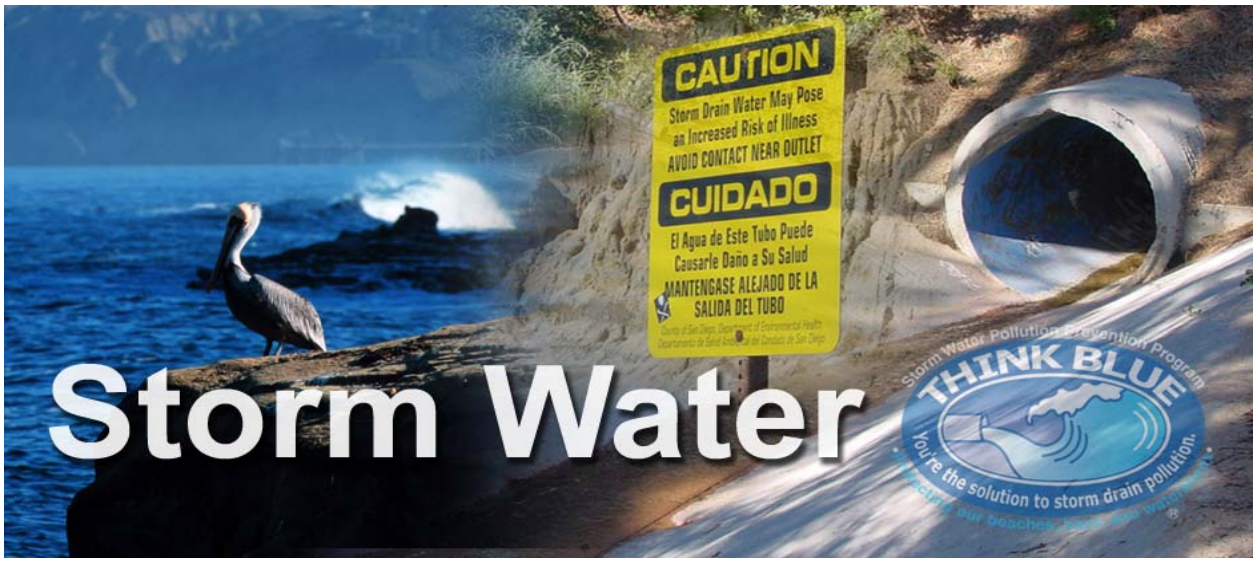
Storm Water



Department Description

The new Storm Water Department has been designated as the lead in protecting and improving the water quality of rivers, creeks, bays, and the ocean in compliance with the updated Municipal Storm Water Permit and other surface water quality regulations and orders issued by the State of California. The Department's main objectives are to: (1) identify sources of pollution and abate them through the implementation of innovative and efficient public education, watershed management, storm water development regulations, monitoring, investigation, enforcement, and City-wide training programs; and (2) provide the most efficient storm drain system operation and maintenance services to San Diego's residents, businesses, and visitors.

The City of San Diego has over 70,000 storm drain structures and over 800 miles of drainage pipe. The Department is responsible for inspection, maintenance, and repair of the storm drain system in the public right-of-way and in drainage easements. This includes clearing blocked drains, removing debris from storm drain structures, and cleaning and repairing damaged drainpipes. In addition, the City of San Diego maintains 84 miles of concrete and dirt drainage channels and ditches.

This department is also responsible for street sweeping which provides two primary benefits to the City. The more obvious benefit is the collection and removal of paper, leaves, and other visible debris that collect in the gutters. This debris can block storm water facilities causing localized flooding during heavy rains. An equally important, but less visible benefit is the removal of metal particles and other hazardous waste products left by passing vehicles. Although they are virtually invisible, these particles can be extremely harmful to fish and other wildlife if they reach our creeks, rivers, beaches, and bays. Street sweeping is an effective method of removing both the large and microscopic pollutants that collect on City streets. This sweeping also serves as a Best Management Practice (BMP) to control and improve water quality. Motorized sweeping removes an average of 220,000 pounds of debris from the street before it goes into the storm drains. The City currently has over 2,700 miles of improved streets that are included in the sweeping program. The Department has 20 power sweepers and operators, with a support staff of truck drivers and parking enforcement officers.

The Department's mission is:

> ***To protect and improve the water quality of creeks, rivers, bays, and the ocean for the citizens of and visitors to San Diego and for future generations***

Storm Water

Goals and Objectives

The following goals and objectives represent the action plan for the Department.

Goal 1: Identify, reduce, and eliminate pollutants in urban run-off and storm water
Pollution in urban run-off has the potential to harm the region's creeks, beaches, and bays and threatens its social and economic quality of life. Preserving San Diego's natural water resources is one of the most important goals of the City of San Diego. The Storm Water Department is designated as the lead City agency to achieve this goal. The Department will move toward accomplishing this goal by focusing on the following objective.

- Ensure that the City complies with all storm water permits and other regulations

Goal 2: Deliver storm water services in an efficient and effective manner
The Storm Water Department has a responsibility to the citizens of San Diego to provide storm water services in an efficient and effective manner making the most of resources that are made available to the Department. The Department will move toward accomplishing this goal by focusing on the following objective.

- Develop and deliver effective pilot projects

Goal 3: Collaborate effectively with the State, the region, the watershed areas, and other City departments to deliver outstanding storm water services
Storm water regulations have an effect across the City and the region. It is imperative that the Storm Water Department collaborate with all different groups both within the City and the region in order to have comprehensive storm water efforts that will benefit the City and the environment. The Department will move toward accomplishing this goal by focusing on the following objectives.

- Work with stakeholders to proactively influence new regulations
- Create a mechanism for stakeholder participation in projects and programs

Goal 4: Deliver asset maintenance and replacement in a planned and proactive fashion
This will preserve the storm water infrastructure, facilitate planned maintenance and ensure appropriate response to service requests. The Department will move toward accomplishing this goal by focusing on the following objectives.

- Perform planned and unscheduled maintenance to optimize the condition of the storm water collection system assets
- Track assets through a complete and accurate asset inventory
- Maintain an updated assessment of the condition of the storm drain system
- Secure environmental permits to allow for timely maintenance

Goal 5: Enhance street sweeping levels to comply with the storm water permit requirements
This is to comply with the applicable provision of the Regional Storm Water Permit. The Department will move toward accomplishing this goal by focusing on the following objective.

- Comply with storm water permit mandates

Service Efforts and Accomplishments

Regulatory Policy Development
The Regulatory Policy Development Section is responsible for interpreting and negotiating new storm water regulations that affect the City. This section has been participating with the Regional Water Quality Control Board and interested stakeholders in the development of Clean up and Abatement Orders, the Regional Harbor Monitoring program, and Total Maximum Daily Load (TMDL) regulations for dissolved metals in Chollas Creek and bacteria at our beaches and creeks. In addition, the Section participated in groups developing monitoring plans for Los Peñasquitos lagoon and Famosa Slough, developed basin plan amendments, commented on draft sediment quality objectives, and conducted dry weather aerial deposition and bacteria source identification studies. The Department's goal in participating in these efforts is to develop regulations that maximize the protection and improvement of water quality in our creeks, beaches, and bays while being cost-effective.

Storm Water

Monitoring
The Monitoring Section has been responsible for conducting permit-required monitoring for the Coastal, Dry Weather, and Illicit Discharge Detection and Elimination (IDDE) programs. This section has also been responsible for overseeing the Industrial Inspection consultant contract. These programs were mandated by the 2001 Municipal permit. With the adoption of the 2007 Municipal Permit, the monitoring section has significantly expanded its monitoring and IDDE programs, including: increasing the dry weather sampling program from 300 to 700 sample locations, increasing the coastal storm drain outfall monitoring program from 17 to 151 sample locations, and revising the IDDE program to ensure that exceedances in water quality sampling standards are investigated within 1-2 business days.

Construction & Development Standards
To meet the requirements of the 2007 Municipal Permit, the Construction & Development Standards Section has established a treatment control BMP inspection program, compiling a complete inventory of all approved treatment control BMPs, developing hydromodification criteria, establishing minimum BMPs for existing development, and updating the Storm Water Standards Manual and requirements for construction and development planning. They have also been working with the Development Services Department to establish geotechnical guidelines for storm water infiltration, and with the General Services Department's Information Technology section to develop an integrated database system for the Department.

Jurisdictional and Watershed Implementation
In partnership with departments City-wide, the Jurisdictional and Watershed Implementation Section led the update and implementation of the City's Jurisdictional Urban Run-off Management Program. In partnership with other jurisdictions in the region, the Section has been involved in the update and implementation of six Watershed Urban Run-off Management programs. Under the watershed programs, the Section is in the process of planning, designing, or implementing 17 storm water infiltration projects, continued planning of targeted street sweeping pilot projects in three communities, has implemented a targeted watershed-based industrial inspection program, and has begun planning for a pilot rain barrel program at municipal facilities. In addition, the Section led the updates to the City's storm water ordinance in conformance with the 2007 Municipal Permit.

Enforcement
During Fiscal Year 2008, the Enforcement Section initiated 1,925 investigations, 720 Notices of Violation, 278 Administrative Citations, and processed 150 Notices of Violation for Civil Penalties. The Section also conducted a pilot project to assess the cost effectiveness of 24 hour enforcement staffing.

Education and Outreach
The Education and Outreach Section has conducted public outreach for projects including the La Jolla Area of Special Biological Significance (ASBS), Mission Bay, several pilot projects, and the minimum BMPs developed by the engineering section. They have conducted City and county-wide storm water surveys and initiated Community-Based Social Marketing outreach pilot projects in both the Chollas Creek and La Jolla areas. They have been responsible for developing and airing storm water public service announcements to over 3 million viewers. They implemented the second grade Project SWELL curriculum and are developing the kindergarten curricula for the San Diego Unified School District. The Section sponsored public events including December Nights and the San Diego Crew Classic. This Section has also worked on the post fire response, the storm water office move, and training for municipal employees.

Street Sweeping
The Street Sweeping Section is responsible for sweeping all improved City streets using motorized sweepers. Street Sweeping provides two primary benefits to the City. The more obvious benefit is the collection and removal of paper, leaves, and other visible debris that collect in the gutters. This debris can block storm water facilities, causing localized flooding during heavy rains. An equally important, but less visible benefit is the removal of metal particles and other hazardous waste products left by passing vehicles. Although they are virtually invisible, these particles can be extremely harmful to fish and other wildlife if they reach our creeks, rivers, beaches, and bays. Street sweeping is an effective method of removing both the large and microscopic pollutants that collect on City streets. Approximately 4,400 tons of debris is removed annually from the streets before it passes into the storm drain system. The Section's staff also works closely with residents to establish parking restrictions for sweeping, recommends appropriate sweeping times, determines the number of needed signs, and adjust the route accordingly.

Storm Water

After the 2007 wildfires, the Section swept 430 miles and collected approximately 180 yards of debris from the fire-impacted streets.

Storm Drain Operations and Maintenance
The Storm Drain Section is responsible for the maintenance and repair of the City's storm drain system, including the maintenance and operation of 15 storm water pump stations. The Section receives and responds to over 13,000 service requests annually. The Section removes approximately 5,200 tons of debris from storm drains and channels annually. In conjunction with the Engineering and Capital Projects Department and the City Attorney's Office, the Section issues Right-of-Entry permits needed for non-City personnel to perform work on public property and works closely with community groups, volunteers, and private organizations on cleaning and removing trash from storm drains channels. The Section is also responsible for issuing inclement weather reports and identifying the storm condition operational procedures.

Budget Dollars at Work: Performance Expectations

Goal 1: Identify, reduce, and eliminate pollutants in urban runoff and storm water

Performance Measure	Baseline FY2007	Actual FY2008	Target FY2009
1. Number of Notices of Violation (NOV) received from Regional Water Quality Control Board (RWQCB)	4.3	0	0
2. Percent of beach receiving water samples above State recreational water quality standards (AB411)	2.9%	0%	3.5%
3. Miles of beaches in the City of San Diego negatively impacted by storm water run-off	13.70	2.20	7.05

Goal 2: Deliver storm water services in an efficient and effective manner

Performance Measure	Baseline FY2007	Actual FY2008	Target FY2009
1. Cost/benefit ratio of pilot projects (change between Level IV water quality data and BMP versus cost)	3.44 lbs. /$1.00[1]	N/A[2]	> 3.44 lbs./$1.00[3]

Goal 3: Collaborate effectively with the state, the region, the watershed area and other City departments to deliver outstanding storm water services

Performance Measure	Baseline FY2007	Actual FY2008	Target FY2009
1. Percent of requested policy recommendations made to external agencies that are implemented	N/A	N/A[4]	15%

Goal 4: Deliver asset maintenance and replacement in a planned and proactive fashion

Performance Measure	Baseline FY2007	Actual FY2008	Target FY2009
1. Percent of storm drain asset assessment completed	< 1%	10%	33%
2. Percent of storm drain structures cleaned on a quarterly basis	5%	38%	25%

[1] Baseline cost/benefit data derived from Street Division's City-wide street sweeping data for Fiscal Year 2007
[2] Data will be available in January 2009
[3] Target established for Storm Water Department's pilot street sweeping project
[4] Pending response from regulatory agency

Goal 5: Enhance street sweeping levels to comply with the Storm Water Permit requirements

Performance Measure	Baseline FY2007	Actual FY2008	Target FY2009
1. Percent of residential streets swept monthly	Estimate: 50%	82%	100%
2. Percent of commercial streets swept weekly	Estimate: 100%	78%	100%

Budget Dollars at Work: Sizing and Workload Data

	Actual FY2005	Actual FY2006	Actual FY2007	Actual FY2008	Target FY2009
Sizing Data					
Miles of storm drain pipes	800	800	800	800	800
Number of storm drain structures	70,000	70,000	70,000	70,000	70,000
Workload Data					
Number of samples collected	4,891	5,624	6,287	7,519	10,672
Number of Illicit Discharge Detection and Elimination investigations initiated	105	228	206	178	2,000
Number of Technical/Stakeholder Advisory Groups participated in	9	12	12	21	21
Number of purchase orders/contracts required to perform the work of the Department	31	27	69	29[5]	230
Number of enforcement investigations initiated	1,747	1,961	2,290	1,925	2,135
Percent of enforcement investigations conducted in 2 business days	N/A	N/A	N/A	75%	100%
Miles of streets swept	90,632	88,472	74,000	78,131	100,000
Lineal feet of storm drains cleaned	28,964	12,428	12,929	17,992	10,500

[5] Data reflects last quarter of Fiscal Year 2008